

Appl. No. 10/773,371
Reply to Office Action of January 24, 2006

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REMARKS/ARGUMENTS

The claims are rejected as obvious over a combination of either Kobayashi et al. or over Ichinose et al. taken in view of "Modern Coating and Drying Technology." For some of the claims there is an additional reference cited. There is also an obviousness double-patenting rejection over USP 6,582,802 to Ohbayashi et al. in combination with Modern Coating and Drying Technology.

The essence of each rejection is that Kobayashi et al. or Ichinose et al. or Ohbayashi each essentially teach or claim the present invention method (with some steps being inherent) especially in consideration of the teaching in "Modern Coating and Drying Technology" concerning inherency of certain thermal effects with respect to the drying stages. (Based on the comments by the Examiner there does not appear to be an issue as to the meaning of the drying periods used in the claims.) "Modern Coating and Drying Technology" is used as a reference to show the inherency of certain features in the drying cycle.

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Reconsideration of the Examiner's position concerning the teaching in Kobayashi et al. and Ichinose et al., and withdrawal of the obviousness rejections, is respectfully requested for reasons set forth below.

For each rejection the Examiner has taken the position that

"The incorporation of a solution comprising an additive at a specific point in a process is simply a matter of choice which would not have been expected to produce any difference in outcome, absence a clear and convincing showing to the contrary, since further drying of the aging solution is required."

Applicant respectfully disagrees concerning the criticality of when the solution containing an additive is incorporated into the ink-jet recording sheet and further does not agree that there is not ample evidence of record of this criticality.

More specifically, as the Examiner pointed out, a person of ordinary skill in the art would not expect that the timing of the adding of the additive into the porous layer would produce any special effect. However, as evidenced by the disclosure (and especially the Examples) in the present specification, the results are unexpectedly superior from the point of view that commercially acceptable product is produced when the present invention requirements are met while this cannot be assured if

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the present invention requirements are not met. This is discussed in detail below.

As required by independent claims 17 and 18, the present invention includes a coating step, a drying step (over at least a constant drying rate period) and a step of incorporating a solution containing an additive into the porous layer after the completing of the constant drying rate period and before the completion of the falling drying rate period. The Examiner considers that although the art incorporates an additive into a porous layer during the constant drying rate period, changing this to after the drying rate period is just a obvious choice.

Applicants respectfully submit that, if the requirements of the present invention are followed with respect to incorporating the solution containing an additive into the porous layer after the completion of the constant drying rate period, an ink-jet recording sheet which is not lacking in uniformity is produced. The criticality of this timing is discussed in the specification starting at page 56 and especially at page 57. Concrete evidence of the importance of the requirement can be found in the Examples which start at page 66. As discussed at the beginning of page 85 (referring to the results in Table 3) comparative samples were so

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uneven with respect to the surface layer as to be beyond the commercially viable range. Additional discussion appears at the end of page 85 and the beginning of page 86. These results are repeated again with respect to additional testing in the other Examples.

Thus, it is submitted that evidence of record supports the criticality of the required features not found in Ichinose or Kobayashi. Furthermore, nothing in the secondary art suggests the criticality of the required features. Therefore, it is submitted that no combination of art renders the present invention obvious.

For the double patenting rejection over Ohbayashi the reasoning above applies as well. In addition, claim 17 of Ohbayashi requires "drying" and "then supplying a hardener." Especially when read in view of Example 1, this conveys that the hardener is added after drying is completed. Even if one can interpret the claim (out of context of the disclosure) to be broader, this would not convey a criticality for the present invention requirements.

As for claim 20 of Ohbayashi, in addition to all the arguments above, it is further pointed out that claim 20 is directed to an image forming method and not to a method for

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preparing an ink-jet sheet (although the two methods are related.)

Withdrawal of the rejections and allowance of the application are respectfully requested.

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Respectfully submitted,

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